

thanks to the Examiner, Mr. Walton, for the time and courtesy extended Applicants' attorney at an interview held on April 4, 1990.

At the interview Applicants' attorney discussed in detail the references cited by the Examiner along with a discussion of how he would amend the claims to overcome the rejection.

Applicants' invention as it is now amended relates to a battery having a battery strength indicating and switch means on the battery which is coupled across the terminals of the battery and which is provided with an indicating means to indicate the strength of the battery. In addition, the battery strength indicating means is also provided with an in-line switch which can easily be depressed to complete the circuit so as to place the indicator means across the terminals of the cell and display the charge of the battery. Specifically, the battery indicator and switch means comprises a non-conductive base layer over which is placed a non-conductive top layer and provided between the layers are a first chamber for containing the indicating means and a second chamber for accommodating the switch means. The switch means are preferably conductive strips that are spaced apart and normally in the open position. Thus by a depression of the second chamber

the conducting means will make contact thereby placing the indicating means across the terminals of the battery thereby displaying on the indicator means the strength of the battery. This novel feature of combining the indicating means along with switching means coupled to a battery to indicate the strength of the battery is not disclosed nor obvious from the cited prior art references.

The rejection under 35 U.S.C. 112 second paragraph is believed to be overcome by amendment of the claims as presently presented. In a similar manner, the rejection of originally filed claims 1 and 2 under 35 U.S.C. 102(b) as being obviously anticipated by Marko is overcome by the re-wording of the claims so that they now contain features that are not disclosed or anticipated by the Marko reference.

The references relied upon by the Examiner are Mullersman et al; Kiernan et al; and Marko. The Mullersman et al reference discloses an indicator of a full charge for secondary cells or batteries in which a liquid crystal is employed that comprises a two-piece detection means in which a first portion of an indicating means (such as a liquid crystal strip) is attached to a thermally conductive structure which in turn is attached directly to a battery or cell and a second portion is attached to or simply held

adjacent to a thermally insulating member such as a casing surrounding the battery or cell. (See Column 2 beginning at line 26). The indicating means disclosed in this reference is primarily for use with a secondary cell to indicate when the cell is fully charged. Specifically, if the cell is subject to a further charge after being charged, the temperature may increase and the rise in temperature is sensed by the indicating means to provide a visual means that the cells require no further charging. (See Column 1 beginning at line 23). This reference does not disclose the features of the amended claimed invention whereby switching means are incorporated along with indicating means between non-conductive layers for indicating the strength of a battery.


The Kiernan et al reference discloses a battery package with battery condition indicating means which has a voltage indicator integrally associated with the package. Specifically, a pair of electrical contacts are associated with the voltage indicator and the contacts are so positioned on the package that they are accessible for alignment with the terminals of a battery placed therebetween. When the electrical contacts make simultaneous connection to the terminals of the battery, current flows through the voltage indicator to visually indicate

the magnitude of the voltage of the battery. Similar to the Mullersman et al reference, this reference does not disclose the concept of employing an indicator and switch means which are disposed on a battery and placed across the terminals of the battery. This reference does not disclose the concept of employing a battery indicator and switch means which comprises a chamber to accommodate the indicating means and a chamber to provide switch means so that upon depressing the switch means, the indicating means is connected automatically across the terminals of the cell. The Marko reference discloses a storage battery which displays on its surface an indication means which measures the strength of the battery. As shown in Figures 1 and 2 a meter type instrument is directly connected across the terminals of the battery to indicate the strength condition of the battery. Contrary to this the amended claimed invention recites a battery indicator and switch means which is composed of two non-conductive layers having disposed between the layers a first chamber to accommodate indicating means and a second chamber to accommodate switch means. Indicator and switch means are coupled directly across the terminals of a battery and as shown in Figure 2 can be mounted on the surface of

the battery thereby accommodating a minor amount of additional space. It is respectfully submitted that the novel features of the indicator and switch means employed with the battery as recited in the subject amended claims are not disclosed nor can be considered obvious from the references cited by the Examiner, whether such references are viewed singly or in combination.

It is respectfully submitted that the novel feature of the indicator and switch means as specifically recited in the amended claims which is composed of non-conducting layers having spaced apart internal chambers disposed between the layers for containing the indicating means and the switch means are not disclosed in the references relied upon by the Examiner for the reasons advanced above. It is respectfully requested that the application be allowed and advanced to issuance.

Respectfully submitted,

  
Cornelius F. O'Brien  
Attorney for Applicants  
Reg. No. 24579

April 24, 1990  
Tele.: (203) 794-6160  
Docket No.: 9786:01001  
0483i

- 9/-

1/6